Hobbies WEEKLY

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A realistic, easy-to-make, non-working MODEL AIR-RIFLE

THE model air-rifle illustrated herewith is merely a "dummy" one, its design being based on a popular pre-war type. The fact that the model is non-working, however, makes it a "safe" plaything for kiddies.

We have, as far as possible, included most details, such as rear and front sights, a moving trigger, with "protective" guard, including a cord strap so the rifle can be slung over the shoulder in a typical soldierly manner.

Simple Needs

Very few materials are required to make the model. And there is nothing difficult in the construction, unless it is in the shaping of the stock and the cutting of the mortise for the trigger and spring. The stock of the rifle can be made independent of the barrel which, incidentally, can be a length of suitable dowelling.

But if you can obtain a piece of wood long enough, it is possible to make the rifle as a complete unit from the one piece. In other words, the barrel is included in the marking out, it being later rounded neatly (like a dowel) in the shaping up.

This saves having to bore a hole in the fore end of the stock for the dowel barrel, which is a job requiring care and patience to perform truly. Of the two methods, the cutting out of the complete shape from a single piece of wood is to be preferred.

To do so, you will need a $\frac{7}{8}$in. thick board 34ins. long by 7$\frac{1}{2}$ins. wide (but a full 3ft. length, by the way, the extra 2ins. allowing for trimming) To mark out the shape, measure off the length of the stock and body, this being 23ins., as shown at Fig. 3.

The Barrel

The barrel (Fig. 2) is 11ins. long by about $\frac{5}{8}$in. wide; mark it out as in the side elevation. The shape of the stock and body is plotted in 1$\frac{1}{2}$in. squares. The finger grip (to be made at each side) on the body is marked on and must not be cut out, as it is meant to be carved out with a gouge as a kind of louvre or indentation only.

The best implements for cutting out the shape are bowsaws or keyhole saws. All straight shapes, such as along the barrel, underside of the body and at the upper and lower edges of the stock, are more conveniently cut with a panel saw. These shapes should be cut first, then the curves cut with the other implements.

The shaping of the stock (a matter of rounding over the edges) is roughly executed with a sharp penknife, then with a spokeshave. The straight

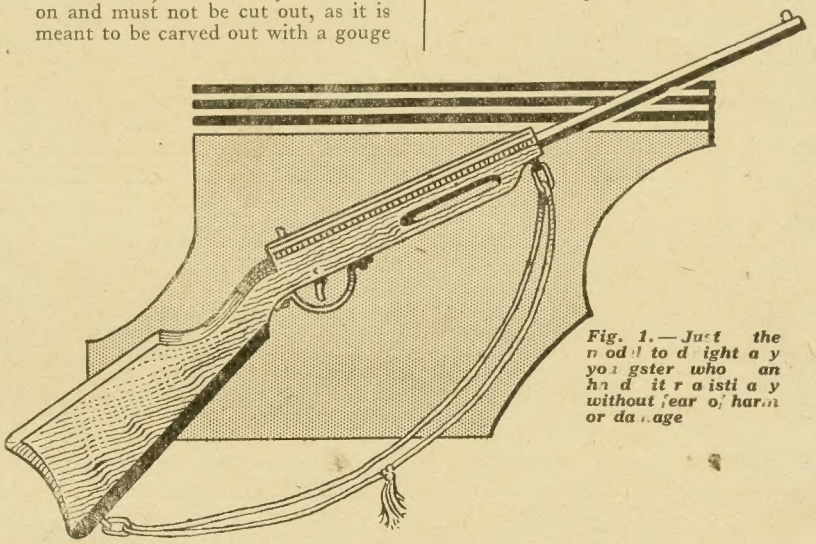


Fig. 1.—Just the model to delight any youngster who can handle it reasonably without fear of harm or damage

shapes on the stock should be rounded with a smoothing plane or block plane.

This also applies to the rounding of the top edges of the body. In respect to the barrel this will need to be reduced in thickness to ⅝in., following which it is neatly rounded, first with the penknife, then with rasp and glasspaper. Take your time over this shaping, as it is easy to spoil the work.

The finger grips, or louvres, should not be gouged too deeply. About ⅜in. deep will suffice. Use a ⅜in. gouge, or failing that, a sharpened ⅜in. shell bit will serve for the purpose.

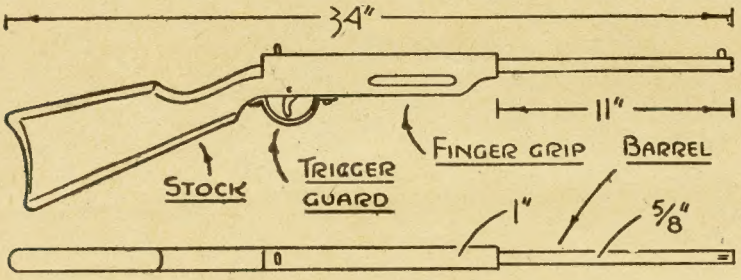


Fig. 2.—Side elevation with top view and dimensions

Independent Barrel

Assuming you have to make the barrel an independent unit, it is advisable to bore the hole for it in the fore end of the body piece prior to shaping it up, as shown at Fig. 4. The depth of the hole should be 1½ins. or so. The work is best held upright in a bench vice while boring. Keep the bit in line with the body of the work and see that the boring is upright all round, otherwise the barrel will look extremely odd if fitting in at a slight angle, completely out of true.

Before gluing the barrel into the body, drill a 3/16in. diameter or ¼in. diameter hole in its nose, the depth being about 2ins. Then make a tiny slot for the sight which can be a thin, shaped piece of wood. Instead of using wood for the fore sight, a small staple driven into the barrel will do, or you could use a piece of bent wire.

The barrel should not be glued to the body of the work until the wood has been shaped and the trigger mortise made. The hammering may have effect on the barrel, causing it to shake and tremble and possibly split the wood.

The mortise (Fig. 4) is situated just in front of the stock. The depth of the slot is 1½ins., the length being

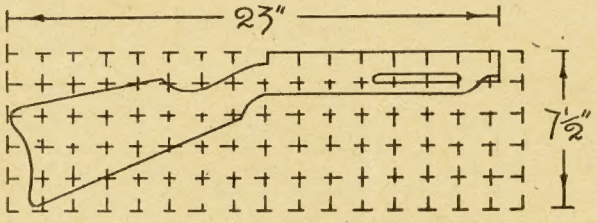


Fig. 3.—The stock plotted in 1½in. squares

1in., whereas the width is ¼in. or 5/16in. When cutting out the mortise with a ¼in. chisel and mallet, have the wood firmly clamped in the vice. To save a lot of chiselling, a series of ¼in. holes could be bored in a line to the depth required, this removing most of the waste.

The Trigger

The trigger is cut from a piece of hardwood 2ins. long by 1½ins. wide by ¼in. thick. The shape is given at Fig. 4, being plotted in 1½in. squares. Regarding the spring, use a piece of alarm clock spring or steel corset rib.

The spring is bent (with pliers) to the shape shown in one of the diagrams following which it is affixed inside the mortise with a single roundhead screw. The top of the trigger must engage the free end of the spring in the manner detailed. A small length of wire or a nail serves as a pivot for the trigger.

A very neat trigger guard can be made from the tin seal usually found around the lids of pickle and meat paste jars. It is only a matter of finding the *half* of its diameter, bending tabs and cutting away the waste, then drilling holes in the tabs for fitting the guard on with screws.

A Metal Guard

Of course it is just as easy to make the guard from a ½in. wide strip of sheet brass, copper, tin, etc. There should be no sharp corners on the tabs. Have the ends of these rounded so the screw holes are the centres.

A small brass screw-eye affixed on top of the body of the rifle in the position shown serves as a rear sight. Failing a screw-eye, two small oval nails driven into the wood about ½in. apart and sitting up about 3/16in. will serve, or you could make a special "eye" from thin metal.

The best way to finish off the work is with enamel paint. The barrel and body, for example, could be enamelled black, the stock being done a brown colour. Trigger, guard and sights could be be coated with silver paint, including the finger grips.

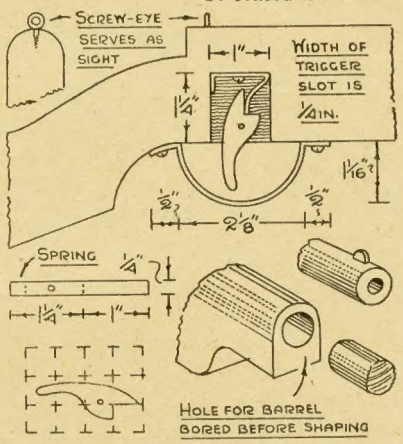


Fig. 4.—Helpful constructional details

If a shoulder strap is wanted, picture eyes, with rings, are screwed into the body and stock, as shown at Fig. 1, and a length of cord put through the rings and tied. It is better to unravel the free ends of the cord so as to form a tassel; this is better than a plain knot.

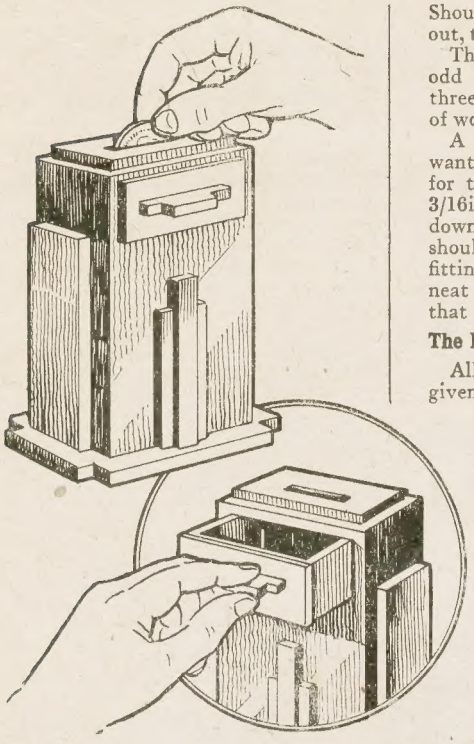
Removing a Floor Board—

You may have occasion some time to lift a floor board, and a lot of trouble is saved by knowing the correct—which is always the easiest—way to do it. Do not start by endeavouring to lever one up or you will tear the board unnecessarily. Find the end of a board nearest the spot needed, and gently but firmly hammer the nails right through, with a punch, into the joist. Use a wide screwdriver or cold chisel then to lever up the end and saw off the length needed. Cut across where the joint will come over a joist, so re-nailing can be done easily. With this hole provided, you can use a keyhole saw to cut across the next boards as required.

Saw close to a joist so you can afterwards screw a block to the joist itself. This will allow the board when replaced to be nailed down to a solid block. Never make a saw cut between the joists; the direction of these can be seen by the line of nails in the boards. In refixing, use proper floor nails. These can be hammered right home into the boards so as not to protude. Drive in at a slight angle to ensure a better grip.

Patterns printed on Cover iv for this simple

MYSTERY MONEY BOX



HERE is a chance to mystify your friends, and possibly to get a little spare pocket money at the same time. A money box is always a fascinating piece of work, but this one is unusually so. You see, you put a penny—or a shilling, if you like— into the slot, hear it drop into the box, and when you pull the drawer open at the front, lo and behold it has disappeared!

How is it done? Close the drawer, put another coin in and the same thing happens again. Very mystifying! Yet it is all quite simple, like most other things when you know how.

The Mystery Explained

All that happens really, is that the drawer has a movable floor, and when it is shut the floor, being pivoted, slopes downwards towards the back of the box.

Thus, when the money is dropped in it falls on to the floor of the drawer and promptly slides off and down into the compartment beneath.

As the drawer is pulled out, however, its floor is guided upwards by the angle block underneath, and brought up flat so when it is pulled further out the drawer appears to be quite a normal solid piece of work. The drawer is prevented from coming right out by a small screw put in on the underside of the back of it. Should the drawer come completely out, the secret will at once be revealed.

The box is easily made with some odd pieces of 3/16in. fretwood, or three of Hobbies standard panels of wood G3 may be bought for it.

A little piece of ⅛in. wood will be wanted for the back of the drawer and for the front of it, a spare piece of 3/16in. stuff may be glasspapered down to suit these two pieces. Care should be taken to make a nicely fitting job, with all edges clean and neat and especially the drawer so that its joints are not really visible.

The Patterns

All the patterns for the parts are given full size on Cover iv and providing you can cut straight edges with the fretsaw, the work should be found quite simple. Paste the patterns down to the wood, noticing the arrows should point the grain of the wood in all cases.

Where there are two pieces required from the same pattern, one piece may be cut from the pattern, while the second piece may be outlined on the wood by drawing round it in pencil direct on to the wood. Note, too, that the back of the box is cut to the same outline as the front, only the latter having the opening cut out for the insertion of the drawer later on.

The Raising Piece

Cut the front of the box, then, with its opening and draw round it to produce the back. Next cut out piece E and glue it to the inside of the front just as seen in Fig. 1. The upper corner of the piece be it noted, must be in line with the bottom edge of the opening in the front.

Next cut the two sides and glue them to the front, their edges all being flush and even. When the glue has hardened cut the two pairs of guides and runners for the drawer and glue them in as in the detail, keeping them square with the front so the drawer will run smoothly later on.

Now glue the back on and the ornamented base. The plain oblong overlay pieces to go on the sides may next be cut and attached according to the dotted lines which give their positions. One of these overlays will be screwed in place and if it is thought necessary, small blocking pieces may be added to the floor and sides, and in the corner of the sides to give strength. The top of the box should not be attached until the drawer has been made and tested in its place.

The construction of the drawer is shown in Fig. 1. The parts A, B and C are cut carefully and glued and strengthened with fine fret pins. Note where the holes come for the pivoting pins in the sides C, and make the floor D to fit loosely inside this frame.

Drawer Construction

Get the floor to such a fit that it will drop easily and not stick or hang up. The pivot pins must pass easily through the sides C, but hold tight to D into which they are driven.

Should the drawer fit too tightly between the guides and the runners the sides and the top edges should be rubbed down on coarse glasspaper finishing up on a finer grade paper.

Another point to watch will be the pivot pins in the sides of the drawer—these must not scrape the sides of the box. They must therefore be sunk a little below the surface.

The front of the box may have the simple decoration shown consisting of one ⅛in. centre upright with a thinner strip up each side of it. These may be stained with the rest of the box and made lighter or darker as taste dictates.

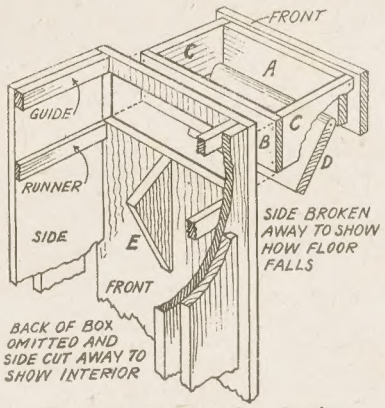


Fig. 1—A cut-away view showing construction

It will be understood from the pattern sheet that the money may be extracted from the box through the slot in one of its sides, the slot being artfully covered by the overlay which at first sight appears only as a decorative addition.

Solution to last Week's Cross Word

P	I	L	O	T	■	■	M	A	S	S
O	■	A	■	■	■	I	■	I	E	
L	A	D	E	N	■	N	O	S	E	
I	L	L	S	■	O	I	■	■	I	
T	I	E	S	■	B	A	C	O	N	
E	A	S	E	■	I	T	■	■	G	
■	S	■	N	A	T	U	R	E	■	
A	■	■	C	O	U	R	A	G	E	
F	L	E	E	■	A	E	R	O	■	
T	I	M	■	■	L	■	E	■	■	

You can amuse yourself and your friend with SOME SIMPLE MAGIC

ONE of the fascinating things about performing tricks before your friends is that they ever afterwards expect them from you. That means you must always be learning new stunts, and the more you learn the keener you become, and the more able to put over your magic effectively.

You will have noticed that the skilled magician always has good patter, and it will pay you to remember all the good jokes you hear. The point in talking to an audience is partly to fill in the gaps while you are making preparations, and also to distract attention at any moment when you do not want the onlookers to observe too closely.

Distraction

There is another way of achieving this. Suppose you want your right hand to be unnoticed while it does some necessary bit of trickery, then it is good technique to do something at the same time with the left, and to look at the left hand yourself. You will find that the audience tends to look wherever you are looking, so you can readily direct their attention away from the thing you do not want seen.

These two matters—cheerful patter, and the ability to divert attention—are at the root of all good magic, and you will do well to give them plenty of attention.

Ventriloquism

The magic art of ventriloquism is a good example of the principles just laid down. The word actually means "speaking from the stomach". Most people think of it as "throwing the voice." Both these explanations are wrong.

Ventriloquism is nothing more than talking without moving the lips, and at the same time leading your audience to think that the sound is coming from somewhere other than your own mouth.

First you must learn to speak with no lip movement. That needs practice, but is really not difficult. What does require more care is learning how a human voice is muffled or distorted when it comes, for instance, from the other side of a door, or from under a table.

The Distant Voice

Notice this with greatest carefulness for you must next learn to imitate that muffled or distant blurred voice sound. It is often a matter of pronouncing words rather less clearly than usual.

Having studied this matter, stand in front of a mirror and do your talking in the "other side of a door" or "under the table" tone, watching to see that your lips do not move in the slightest degree. When you reach this stage of proficiency and can really imitate the special sounds required, then you are ready to attempt a performance before your friends.

With a Doll

The professional entertainer has a doll, and an artificial voice which is supposed to belong to the doll. By moving the jaws of the doll to fit the words, it really does seem that the doll is talking. But there is still more fun for your few friends, if you can persuade them that someone up the chimney is speaking, to a person outside the door. And the principle is just the same as for the doll.

You may have noticed that it is almost impossible to judge direction by sound; you rarely can tell whether a train or plane is coming from right or left—until you see it. So, with your ventriloquism—your audience can be made to believe a sound comes from almost anywhere, for their ears give little or no help.

You have only, when sitting in a room with them, to look suddenly at the cat under the table, and to seem to believe that the words spoken come from it instead of from behind your own still lips—and they will be tempted to believe the same.

Try it and see. There is absolutely no more in ventriloquism than has been here described, but the more you practise it the better results and the more fun you will get.

Bangle Mystery

This is more ordinary conjuring, and needs almost no practice. All the equipment you need is two bangles exactly alike and a length of string.

Hand round a bangle for your audience to examine. Then ask them to tie each end of the string to your wrists, one end to the right and the other to the left. When this is done your wrists will be linked together with about a couple of feet of string between them. Let the spectators make the knots as secure as they like, but tell them that within a few seconds you propose to get the bangle threaded on the string.

Then take the bangle from them, and turn round a moment so that they cannot see what you are doing. Hide the bangle in your waistcoat—and pull down the second bangle, which was already on your arm, concealed up your sleeve, so that it comes over your hand and on to the string. Then turn and show the onlookers.

Waistcoat stunt

Can you take off a man's waistcoat without removing his jacket. That certainly sounds like magic—but it can be done.

It will be best to have someone with a loose-fitting jacket, which makes it easier for you to perform on him.

Unbutton the other's waistcoat, and stand behind him. Put your hands up beneath the back of his coat

(*Continued at foot of next page*)

For cutting bread quickly and evenly you should make BREAD SLICING GUIDES

WHEN bakers ceased slicing bread and mothers found difficulty in keeping the slices regular in thickness and shape these bread slicing jigs were developed. There was one consisting of a knife with a movable fence, and a second idea consisting of a rectangular bottom with four steel straps of iron assembled with nail and glue and an adjustable stop to control the thickness of the slices. Both of which can be made by the handyman.

How it Operates

Any common size loaf will fit these slicers. The bread is best sliced by holding it gently with one hand while the other operates the bread knife, which is lowered as the cutting goes on and used with a gentle sawing motion. Perfectly straight slices can be cut by anyone because the knife cannot vary from the perpendicular.

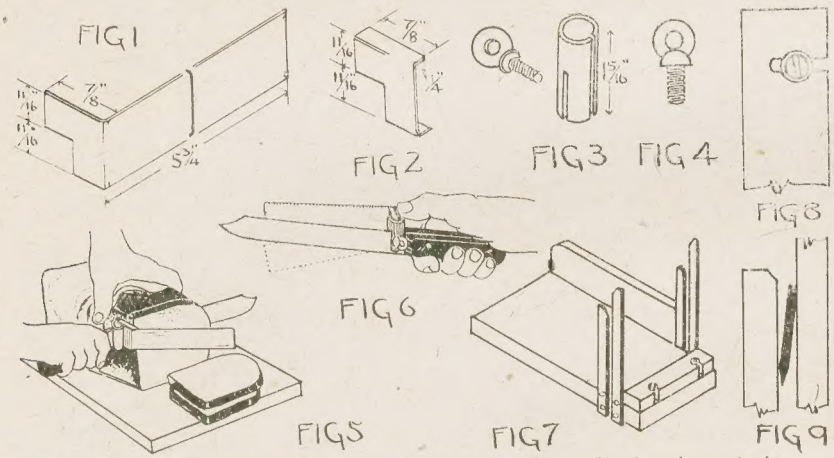
Then there is absolutely no chance of the knife edge contacting the guide. The reason for this is illustrated at Fig. 5 and Fig. 9, and not the least important, in view of the ban on the sale of sliced bread, is the fact that the device will be welcomed in most homes because of the difficulty that many people are experiencing in cutting bread evenly.

The device shown at Fig. 5 when slipped over the back of a knife blade will make it easy to cut slices of uniform thickness throughout. At Figs. 1 to 4 the construction details are given.

The material may be salvaged from any metal store and from the scrap piping in a plumbers shop. The pipe need not necessarily be galvanized; black iron pipe may be used. File the pipe clean and polish with emery cloth.

After the sheet metal is cut to the size as shown at Fig. 1 and Fig. 2 and the bends made, make four small saw cuts about $\frac{1}{8}$in. long at the corners and end. Then bend the three edges over as shown in the section line Fig. 1.

Should any holes be left at the saw cuts fill these in with solder so the part of the guide which slides against the bread will be smooth and have rounded edges.



Cut the slots in the piece of pipe shown at Fig. 3. For an extra thick bladed knife use three saw blades in the saw frame to cut the knife slot. If desired, the slot can be tapered to conform to the taper of most knife blades, by pinching the pipe in a vice, thus making the slot narrower at the bottom.

For Thick Blades

Prepare and tap the socket for the set screw (Fig. 4) which is a round-head machine screw with a $\frac{9}{16}$in. washer soldered into the slot.

When inserting the knife into a tapered slot it may be necessary to put the knife in the slot end first. Use moderate pressure when tightening the set screw so the metal guide automatically swings up when the guide touches the bread.

When properly adjusted on a tapered knife blade the guide will be pivoted on the knife blade and will not slide up on the blade. After cutting each slice merely reset the guides a shown at Fig. 6 by pressing forward with thumb on the top of the pipe. This causes the guide to drop as shown by the dotted lines.

Setting the Guide

When using the slicing aid the hand should be relaxed. Use only enough side pressure to keep the guide sliding very lightly against the bread.

A precaution to be observed before soldering the guide to the pipe, is to clamp a metal straight edge such as a 12in. steel ruler in the knife slot so as to line up the guide with the knife slot. Set up the guide $\frac{1}{2}$in. from the ruler and solder Fig. 1, Fig. 2 and Fig. 3 together. Be sure the slot which represents the position of the knife blade is parallel to the fence. The top and bottom flanges of Fig. 2 are then soldered in position.

Another Device

To those who would prefer that the knife should not be loaded in any way in cutting the bread a very simple device can be made up as shown at Fig. 7 with metal knife guides. In this type the bread is held against the stop which, being adjustable, lends itself for the slicing of bread, ranging from $\frac{1}{8}$in. to $\frac{3}{4}$in. in thickness

The size of the base board should be suitable for the kind of loaf mostly in use. The mild steel guides are two at 8ins. and two at 6½ins., each $\frac{1}{2}$in. by $\frac{1}{8}$in. and bored singly for two screw nails at the bottom end.

The stop is 1½ins. by $\frac{3}{4}$in. prepared to two 1¼in. screw nails as shown at Fig. 8. The finish of the wood in these devices may range from no finish at all to an artistic enamel job. A quick and attractive finish consists of sginle coats of shellac and wax.

Simple Magic—*(continued from previous page)*

and force up his waistcoat to his shoulders. Now put your hands in over the top of his coat collar and carefully drag the back of the waistcoat clean up over his head, so that it lies stretched across his chest.

Next, tuck the right corner of the waistcoat down his right sleeve and, putting your hand up from his wrist pull this corner down towards you until the armhole of the waistcoat eventually comes right down over his hand.

This will be followed by pulling the freed half of the waistcoat back up the sleeve. When it comes out it will hang quite freely in front of him.

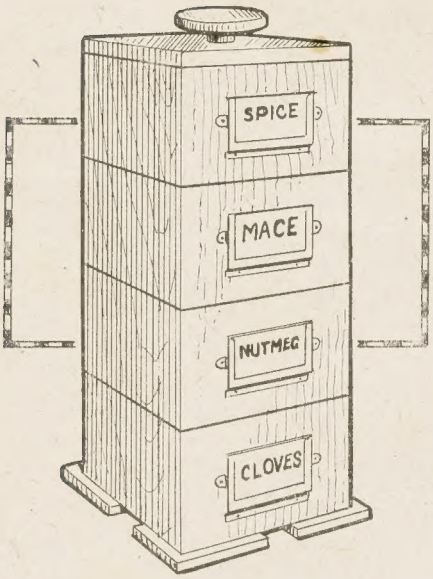
Now, you have only to tuck the left corner of the waistcoat into the top of the left sleeve of the coat, and then to reach up from the wrist, as for the other arm, and tug it down. But this time the whole waistcoat will come right off, and be free.

If you have trouble at any stage of the trick it is likely to be early when you have to get the back of the waistcoat up over the head. For this you need great care, easing it up the arms little by little and at every point where there is a sign of strain.

You should, of course, practice the trick well before actually showing it.

Save room, time and trouble by making these

MULTIPLE BOXES



THESE boxes are economical in cupboard space, and also save wood as the bottom of one box acts as a lid to the one beneath it. They are quite neat in appearance too, and if nicely made and polished, form a not inartistic addition to the home.

They can be used for a variety of purposes, spice box in the kitchen for example, or nail and screw box in the workshop. The sizes given are quite optional, and have been chosen mostly to suit "Hobbies" 4in. by 9in. panels of fretwood. Readers can of course, amend these sizes to suit their requirements or the wood available.

Wood Required

For the wood, ¼in. fretwood is suggested, or ⅜in. thick deal if it is desired to save the fretwood for other purposes. Cut the four sides of the boxes in one piece, that is one piece to each side irrespective of the number of boxes, and fix together with glue and nails.

Do not forget that two of the sides should be only 3½ins. wide not 4ins. if the ¼in. fretwood is used to make up the boxes to ensure a finished square shape.

This is not imperative of course, but if panels of wood are used of the 4ins. by 9in. size mentioned the shape must be 4ins. square, not more, or the panel for the lid will not be wide enough.

It is best to nail partly together at first, driving the nails in just a little. Then prise apart, glue the edges, and replace the pieces in their former position and drive the nails home.

Use headless nails if possible, like panel pins, so that they can be punched down and the holes stopped. This hides the nail heads and makes for a much neater finish.

Sides

The sides should now be divided by cross lines, squared all round, to divide the shape into four equal parts, as in Fig. 1, or as many parts as boxes are required. Saw on these lines with a fine tenon saw and divide off. Finish the sawn edges by rubbing on glasspaper.

A simple method of sawing these shapes into boxes should be adopted. Perhaps the best and easiest is to saw across one side first, then the opposite side. Then turn over and finish the cutting by sawing across from one saw-cut to the other, so dividing the boxes off.

The bottoms of the boxes are cut from thicker wood, say ⅜in. deal, or even from common box wood. Plane the wood smooth if of the rougher kind, and cut the bottoms to be a close fit. A section through the lower of the boxes, Fig. 3, will show how these bottoms are glued and nailed in.

That for the lowest box, A, is nailed in as for ordinary practice, but those for boxes B and C, etc., are fixed in halfway so that the parts projecting downwards will fit in the box beneath and so form lids to them at the same time keeping all in vertical alignment.

Now cut two 4in. squares of the fretwood, one for the lid and the other for the feet. That for the latter is marked out as in Fig. 2., first striking the circle in the centre and then dividing the remainder into four equal quarters.

Saw out, and keeping the disc for the lid handle, glue the quarters underneath the lowest box, letting them project out say a ½in. as felt.

The Top Lid

For the lid square, a rim should be cut and glued to it underneath to keep it in place. The strips sawn off to reduce the sides to 3½ins. will do for this rim. The pieces composing it are 3½ ns. long and should be mitred together like a picture frame and then be glued to the underside of the lid.

Cut a ½in. thick bit of wood to a disc ¾in. diameter or two ½in. thick discs would do, cut from scrap fretwood left over. Glue these to the disc already cut from the "feet" square, and nail or screw to the lid to make a handle for it.

Now glasspaper the work to smoothness. Pay special attention to the edges of the projecting bottoms of the boxes to make them fit one on another quite satisfactorily.

Finish with polish or varnish, as desired, or according to the wood used. Fretwood is generally worth polishing, if time for the job can be spared, but deal is better varnished or it can be painted or enamelled.

Labels

It is desirable to label the boxes according to their contents. The names could be painted on, or printed on strips of card, the cards themselves being glued on before the work is varnished, the varnish being applied then over the lot.

A neater method is to cut some thin metal into frames to hold the name cards and so allow the titles to be altered at any time desirable besides looking so much smarter.

The frames can be cut from thin brass, or tinplate, to the size given in Fig. 4. They are then bent to shape, as at A, and are nailed to the boxes with small rivets or other suitabe nails. Unless they are cut from brass, the frames should be enamelled or coated with eggshell black.

The cards can be cut from old visiting cards, or postcards would do. Then the names are neatly printed on and the cards pushed in the frames. The side edges of the frames should be pressed inwards.

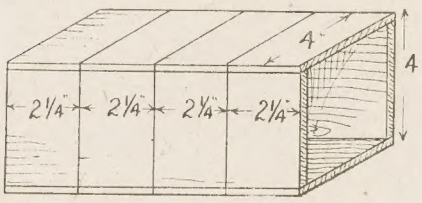


Fig. 1—The box ready to cut in pieces

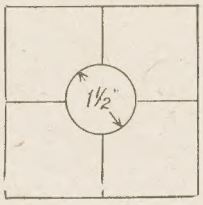


Fig. 2—Lid and fret

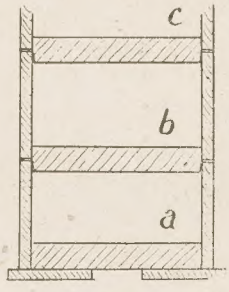


Fig. 3—Section detail

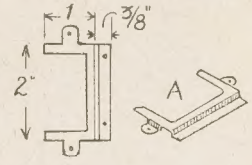


Fig. 4—Label holders

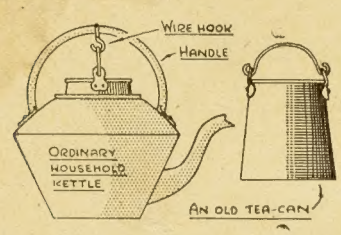
USEFUL THINGS ANYONE CAN MAKE

FROM ODDS AND ENDS

A Glue Kettle

GLUE pots and kettles are rather difficult to obtain these days. That being the case, the simple combination shown herewith—which serves the same purpose equally as well as the real thing—will be of interest.

The substitute is nothing more than an ordinary domestic kettle and an old can in which one boils tea (any adequate-sized tin, fitted with a wire handle, may be used as an alternative) It is only a matter of fixing a wire hook to the kettle handle and setting the handle of the tea-can (glue pot) on it.



The tea-can, of course, must fit into the kettle easily. Moreover, the wire handle on the tea-can may require to be lengthened or shortened according to the depth of the kettle.

When using this glue kettle, the latter must be filled three-quarters full with water. There is, by the way, no chance of the water boiling over—a bogey with the usual, tight-fitting glue kettle and pot. Steam can escape easily.

Having heated the glue and stirred it thoroughly, do not lift out the container but take it over to where you may be working. The best plan is to take kettle and all away, as the heat in the water will keep the glue hot and in a liquid state for a long time.

Helpful Hints

Stiff, tacky, chilled glue is worse than useless It cannot penetrate into the pores of wood and thus ensure a good adherence. Incidentally, tin kettles can be used as well as the iron types. The latter retain the heat much longer. A tin kettle, on the other hand, enables the water to be boiled sooner.

If the kettle is an old one, the spout could be removed, if desired, and the hole sealed up with a disc of tin. this being soldered on. To save this extra work, the tip of the spout could be plugged with a cork.

If the kettle is a tin one, the hook (for the wire handle of the tea-can) could be fixed in a hole drilled through the kettle handle. The hook is then not so liable to shift about.

A Saw-Knife

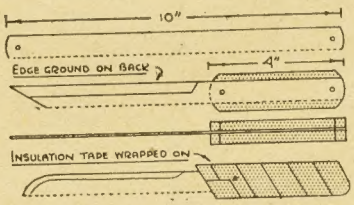
KNIVES are needed when carving out models, slicing wood, paring, chipping and so on, but what about a knife that is also a saw? The simple combination tool is shown herewith and, as will be observed, the main part is a 10in. hacksaw blade.

Now, for preference, the blade should be a new one, for it can never be sharpened again, so far as the teeth are concerned. It will last a long time in use and prove invaluable on many occasions.

A Hacksaw Blade

First of all, having obtained a 10in. or 8in. hacksaw blade, a handle is made for it. This handle may be of wood or merely a wrapping of insulation tape. The latter is the easiest, for the tape is wound around the blade, doing so at an angle so that one lapping goes on top of the other, as you see.

If a wooden handle is preferred, a small hole requires to be drilled in the blade about 3ins. from the one at one end. This will be rather difficult, for hacksaw blades are made from tungsten steel, hard-tempered. It will, therefore, be necessary to mark the hole position with a centre punch, then heat that part of the blade (preferably over a gas-jet) until white-hot and allow it to soften, i.e., cool gradually.



The hole can then be drilled or punched. Having done so, get two pieces of fretwood 4ins. long by about ⅜ins. wide by 3/16in. thick and cut them to shape, then drill the rivet holes in them to suit those in the blade. If small flathead screws are used instead of rivets, the holes should be made in one handle piece only, the face side of each being countersunk.

Attach the pieces of wood together, the blade going between. Now, if desired, a knife edge is ground on the back edge of the blade, as indicated. Do the grinding on one side only.

The end of the blade may be pointed, as shown, or given a rounded edge. Having ground the edge, the blade is rubbed on an oilstone to remove the roughness and give a very keen cutting edge to the blade.

The Editor's Notebook

I AM constantly receiving news of the work—if a hobby can be called work—being done in all branches of the Services. Some of it is a co-operative and organised effort and some being done by lone individuals. One can well imagine what it means to have a hobby to turn to after the strenuous labour of "exercises" or parades or in the spare time of guards and watches. Many thousands must have found consolation in making our models, particularly the miniatures.

* * *

ONE of the good fellows on H.M.S. Rodney, writing about a bunch of back numbers of Hobbies Weekly which I sent him says "They are more than welcome This ship, during quiet hours, is one huge hive of woodwork industry making toys mostly, now we have a larger scope of ideas and illustrations."

* * *

ANOTHER most interesting letter of model making at sea comes from Marine W. W. Goddard on board the New Zealand ship "Gambia." He says, in a recent letter: "Some time ago I had the design of the 'Golden Hind' and was able to make several models of this old galleon at a good profit. As I was in the Pacific Ocean at the time I was unable to get the proper wood and fittings. This difficulty was soon overcome by using scraps of wood and pieces of boxes, an old fretsaw, knife and glasspaper. The sails were made from drawing paper soaked in linseed oil, the curved sides from cardboard, guns from copper tubing with soldered ends, dead-eyes from pieces of pencil fastened with fuse wire, pulleys also from pencils, screweyes from brads, thread for rigging and the anchors from copper wire, cut and soldered. When finished and painted they looked good and I had many orders for more."

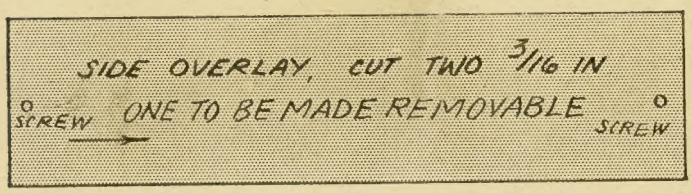
* * *

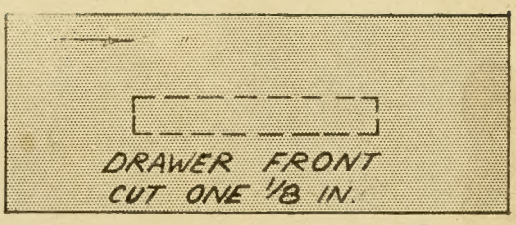
EXHIBITIONS are frequently arranged of the products of the services spare time and one recently held in Nottingham had a wide range of subjects. Apart from the large number in the woodwork section there were exhibits of leatherwork, painting, knitting and needlework—the last two being incorporated by the girls in the services of the A.T.S., W.A.A.F., and W.R.E.N. A new class of exhibits was shown in plastics—evidently the organiser is thoroughly up-to-the-minute in his ideas. Major Gen. J. F. Harter opened the Exhibition and the Lord and Lady Mayoress of Nottingham were distinguished guests.

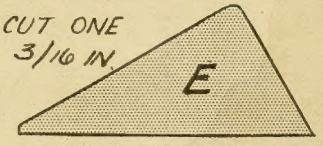
The Editor

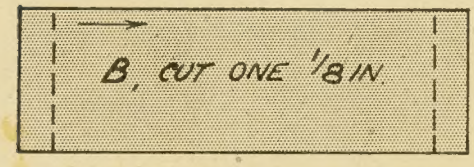
MYSTERY MONEY BOX PATTERNS

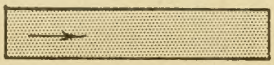
For details see page 179

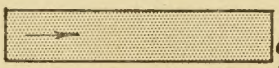


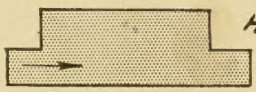


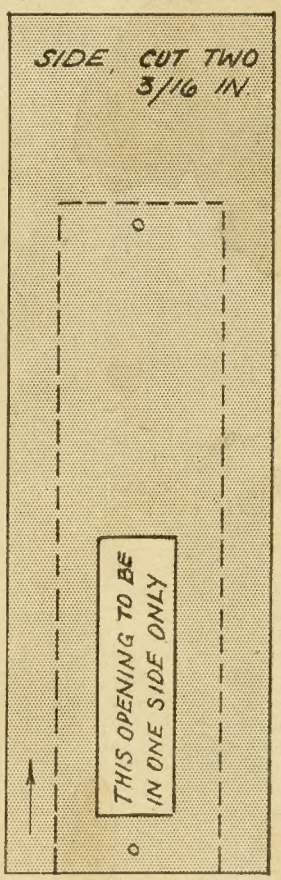


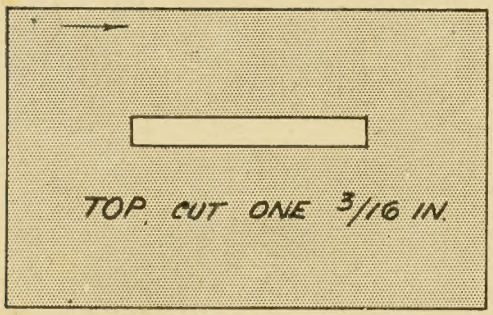


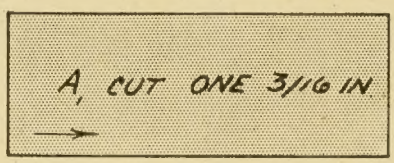




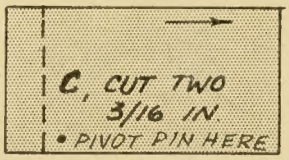


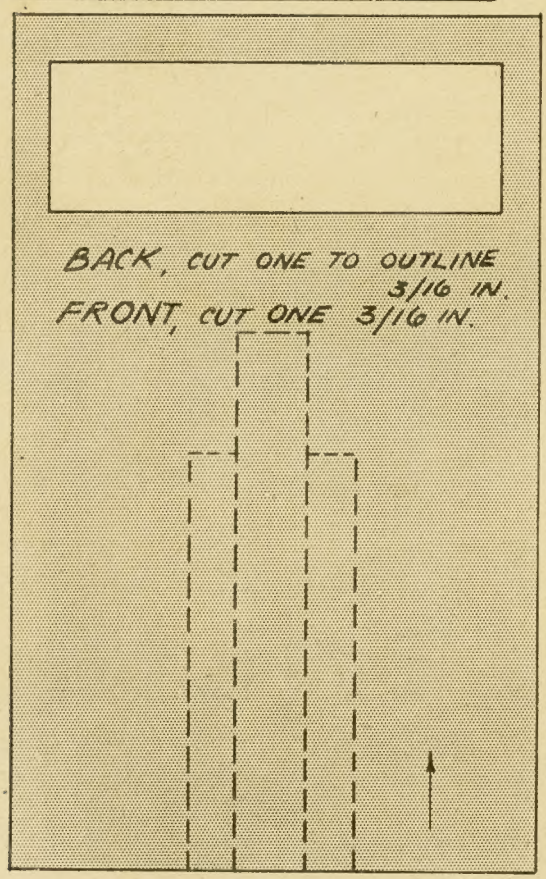


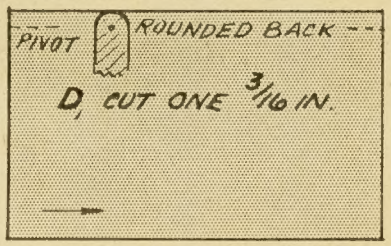


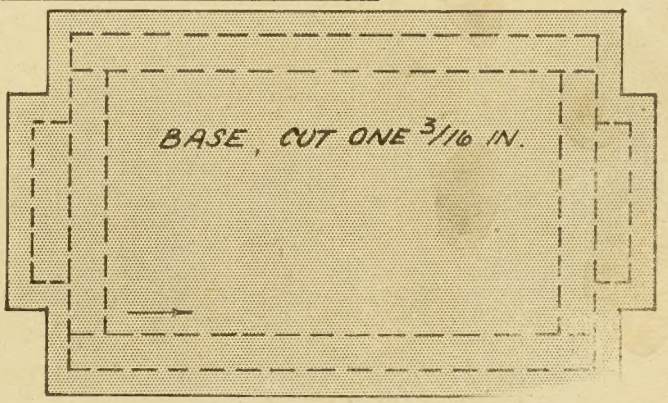


The arrows indicate the direction of grain of wood









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